Center Independent Research & Development: GSFC IRAD

User Initiated Services (UIS)

Completed Technology Project (2017 - 2018)

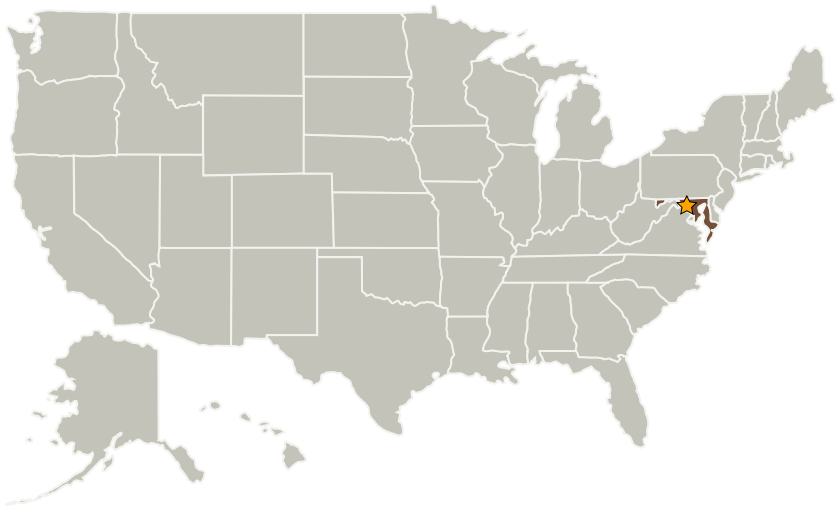
Project Introduction

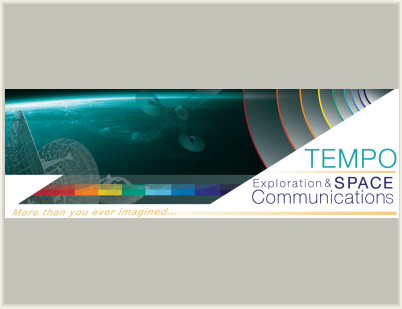
Traditional mission operations and space communications services rely on highly scripted activities, often planned weeks in advance, limiting responsiveness to changing scientific events or conditions of interest. A new protocol, known as User Initiated Services (UIS), will enable more dynamic and collaborative mission operations concepts, reduced user space communications planning burden, and more efficient and effective use of space communications resources through infusion of automated software-enabled services across user mission and provider network resources.

Anticipated Benefits

UIS will enable new scientific and human mission operations concepts, such as event-based and collaborative platform observations, by providing more dynamic and autonomous communications services. UIS will reduce user space communications planning burden through automation. UIS will enable more effective and efficient utilization of space communications resources by automating planning processes and supporting the dynamic re-allocation of link resources based on various criteria, such as mission priority or cost avoidance.

Primary U.S. Work Locations and Key Partners





UIS is one initiative being led by the Technology Enterprise and Mission Pathfinder Office (TEMPO) within the Exploration and Space Communications Division

Table of Contents

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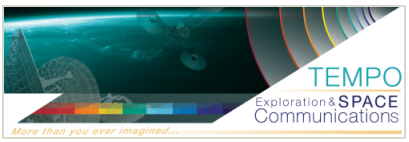
Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland

Primary U.S. Work Locations
Maryland

Images



ESC TEMPO
UIS is one initiative being led by the Technology Enterprise and Mission Pathfinder Office (TEMPO) within the Exploration and Space Communications Division *(https://techport.nasa.gov/image/28218)*

Organizational Responsibility

Responsible Mission Directorate:
Mission Support Directorate (MSD)

Lead Center / Facility:
Goddard Space Flight Center (GSFC)

Responsible Program:
Center Independent Research & Development: GSFC IRAD

Project Management

Program Manager:
Peter M Hughes

Project Managers:
Lavida D Cooper
Timothy D Beach
Jason M Mitchell

Principal Investigator:
Christopher J Roberts

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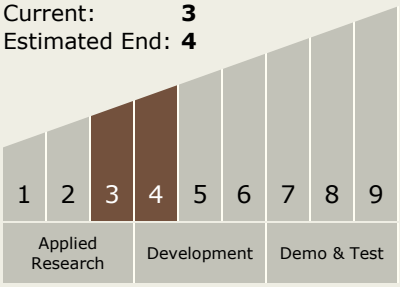
Technology Maturity (TRL)

Start: **3**
Current: **3**
Estimated End: **4**



Technology Areas

Primary:

- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
  - TX05.3 Internetworking
    - TX05.3.3 Information Assurance

Target Destinations

Earth, Foundational Knowledge

Supported Mission Type

Push